

### ABSTRACT OF THE DISCLOSURE

A system for generating a powerful laser beam. A laser element array includes a first laser element and at least one additional laser element. The first laser element and the at least one additional laser element have a rear laser mirror, an output mirror, and laser material between the rear laser mirror and the output mirror. An injector directs a part of the injection laser signal into the first laser element and directs an additional part of the injection laser signal into the at least one additional laser element. The laser element array transforms the first injection laser signal and the at least one additional injection laser signal into a first circulating laser beam in the first laser element and an additional circulating laser beam in the at least one additional laser element. A reference laser beam source directs a first part of a reference laser beam into the first laser element to mix with the first circulating laser beam and directs an additional part of the reference laser beam into the at least one additional laser element to mix with the at least one additional circulating laser beam. An amplifier and phase conjugator amplifies and phase conjugates the first part of the reference laser beam and the additional part of the reference laser beam and produces a first amplified output laser beam emanating from the first laser element and an additional amplified output laser beam emanating from the at least one additional laser element. A combiner combines the first amplified output laser beam and the at least one additional amplified output laser beam into a powerful laser beam.